

HEATHER L. MCMILLEN

RESEARCH INTERESTS

Resilience, environmental anthropology, global environmental change, biocultural diversity

EDUCATION

2008 Ph.D. in Anthropology and Certificate in Ecology, Evolution & Conservation Biology, University of Hawai'i at Mānoa, USA. Dissertation: *Conserving the Roots of Trade: Local Ecological Knowledge of Ethnomedicines from Tanga Tanzania Markets*

2003 M.A. in Anthropology, University of Hawai'i at Mānoa, USA

1995 B.S. in Anthropology, Loyola University of Chicago, USA
Specializations: Black World Studies (Minor), and Human Osteology

POSITIONS

U. S. Forest Service, Northern Research Station, New York City Urban Field Station
Postdoctoral Social Science Researcher – Resilience, Social-ecological systems, and stewardship
1/2015-present

University of Hawai'i at Mānoa, Department of Botany
Postdoctoral Research Fellow – Local Knowledge & Resilience to Climate Change 8/2012-12/2014

University of Hawai'i at Mānoa, Department of Botany
Postdoctoral Teaching Fellow of Ethnobotany 7/2011-6/2012

Cultural Surveys Hawai'i (cultural resource management firm on O'ahu)
Editor & Methods Specialist 4/2009-11/2011

Division of Ecology and Health, University of Hawai'i John A. Burns School of Medicine
Graduate Research Assistant with Dr. Bruce A. Wilcox, Director 8/2001-4/2005

University of Hawai'i at Mānoa, Department of Anthropology
Research Assistant with Anthropology Professor Nina L. Etkin 12/1997-4/1998

The Resource Center (non-profit environmental education organization in Chicago, IL) Environmental
Education Coordinator/Program Developer 8/1995-2/1997

Field Museum of Natural History, Center for Cultural Understanding and Change (Chicago, IL)
Medical/Urban Anthropology Intern with Dr. Alaka Wali, Director 9/1995-3/1997

RESEARCH AND FIELDWORK

Hawai'i (O'ahu, Kauai, and Hawai'i Islands)

Researcher and Ethnographer – Ethnobotany Program (University of Hawai'i)/Pacific Island Climate
Change Cooperative -*Learning from Traditional Ecological Knowledge to understand Climate Change*

Impacts and Preserve Key Cultural and Natural Resources in Ka'ūpūlehu, Hawai'i 9/2012-present

Ethnographer US Bureau of the Census *Comparative Ethnographic Studies of Enumeration Methods and Coverage on the Island of Hawai'i with Special Focus on Native Hawaiians and Other Pacific Islanders* 5/2010-7/2010

Research Assistant- Division of Ecology and Health (University of Hawai'i John A. Burns School of Medicine) *Valuable Plants: inroads to designing community based conservation planning* (PI: Bruce A. Wilcox) 8/2001-4/2005

Tanzania (Tanga Region)

Ph.D. Research 6/2004 - 8/2004, 4/2005 - 8/2006 *Conserving the Roots of Trade: Local Ecological Knowledge of Ethnomedicines from Tanga, Tanzania Markets*

Consultant/Principal Investigator 6/2000-11/2000 Tanga AIDS Working Group (non-governmental, non-profit health organization)

Fulbright Research Fellow 9/1998 - 11/1999 *"Traditional Medicine and Biomedicine: A Tanzanian Collaboration"*

Namibia (Kunene Region)

7/10/2006-7/15/2006 People and Plants International (non-profit organization focused on livelihoods and conservation) *Himba Women's Livelihoods and the Sustainability of Harvesting Commiphora Resin in Kaokoland*

TEACHING EXPERIENCE

University of Hawai'i at Mānoa Courses

Botany 612 "Integrating Ethnobiological Approaches into Natural Science Research" 1/2014-5/2014

Botany 612 "Local Ecological Knowledge and Climate Change on Islands" 1/2012-5/2012; See <https://sites.google.com/a/hawaii.edu/tek-and-climate-change-on-islands/>

Botany 442 "Medical Ethnobotany" 8/2011-12/2011;

Botany 440 "Advanced Ethnobotany" 1/2011-5/2011;

Anthropology 427 "Nutritional Anthropology: Food, Health, & Society" 1/2008-5/2008

Field Courses

Understanding the links between local ecological knowledge, ecosystem services, and community resilience (National Science Foundation Coastal SEES Sponsored research, various locations on Viti Levu, Fiji) 7/13-19/2014 "Social-ecological systems and resilience: Methods training"

Local Ecological Knowledge and Social-Ecological Resiliency to Climate Change in the Pacific (National Science Foundation Sponsored Workshop, Suva, Fiji) – 9/6/2012 "Methods Training for Social-Ecological Systems Research"

Conservation Ethnobiology Field School (National Tropical Botanical Garden, Kaua'i, HI) 1/28/2010, 1/18/2012 "Methods for Marketplace Studies"

Joint Meetings of the International Society for Ethnobiology, Society of Ethnopharmacology, and Society for Economic Botany - University of Kent at Canterbury, England - 6/2004 "Workshop on Data Collection Methods & Database Management for Ethnopharmacology Research"

Aang Serian's Field School (non-profit organization) - Arusha, Tanzania - 8/2004 "Workshop on Data Collection Methods and Issues in Ethnobiology Research from Local and International Perspectives"

Service As Graduate Student Committee Member

- PhD Summer Austin, Department of Botany, University of Hawai'i, Historical Influences on Jamaican Maroon Ethnopharmacopoeia: Trans-Atlantic and Cross-Cultural Diffusions of Medicinal Plants (2011)
- MS Georgia Hart, Department of Botany, University of Hawai'i, Algal polyphenolics as disease-preventative antioxidants in the Hawaiian diet (2012)
- MS Michael Kaguongo, Department of Systematic Biology, Uppsala University (Sweden) (External Thesis Reviewer), Conservation of Wild-harvested Medicinal Plant Species in Tanzania: Chain and consequence of commercial trade on medicinal plant species (2013)

SELECT PEER-REVIEWED PUBLICATIONS

McMillen, H. L., T. Ticktin, A. Friedlander, S. D. Jupiter, R. Thaman, J. Campbell, J. Veitayaki, T. Giambelluca, S. Nihmei, E. Rupeni, L. Apis-Overhoff, W. Aalbersberg, and D. F. Orcherton. 2014. Small islands, valuable insights: systems of customary resource use and resilience to climate change in the Pacific. *Ecology and Society* 19(4): 44. <http://dx.doi.org/10.5751/ES-06937-190444>

McMillen, H. 2012. Ethnobotanical Knowledge Transmission and Evolution: The Case of Medicinal Markets in Tanga, Tanzania. *Economic Botany*. 66 (2):121-131

Etkin, N., T. Ticktin and H. McMillen. 2011. Ethnoecological approaches to integrating theory and method in ethnomedical research. In: Ethnobiology. E. N Anderson, K. Adams, D. Pearsall, E. Hunn and N. Turner, eds. Pp 233-249. Hoboken, NJ: Wiley & Sons Inc.

McMillen, H. L. 2008. Coastal Tanzania Forest-Farm: Medicinal Plant Conservation for Human Health and Biodiversity. In: Human Health and Forests: A Global Overview of Issues, Practice and Policy. C.J.P. Colfer, ed. Pp. 302-303. London: Earthscan

Prance, Ghilleen T., et al (including H. McMillen). 2007. Ethnobotany, the science of survival: a declaration from Kaua'i. *Economic Botany* 61(1):1-2

McMillen, H. 2004. The Adapting Healer: Pioneering Through Shifting Epidemiological Landscapes. *Social Science & Medicine* 59:889-902

Gollin, L.X. and H. McMillen. 2004. Methods for eliciting local valuations of plants as a first step towards

informing community participation in environment and health initiatives in Hawai'i. *Applied Environmental Education and Communication* 3(4):1-9

Dixon, A.R., H. McMillen, and N.L. Etkin. 1999. Ferment This: The Transformation of Noni, a Traditional Polynesian Medicine (*Morinda citrifolia* L.) *Economic Botany* 53:51-68

Publications In Progress

McMillen, H., Ticktin, T., Bertelmann, P., Springer, H., Keakealani, K., and Y. Yarber Carter. Tools for Identifying and Integrating Cultural Dimensions of Climate Change into Adaptation Planning: an Example from Ka'ūpūlehu, Hawai'i Island. **In Review** as a chapter in edited volume called *Small Islands in Peril or Under Pressure*. Australia National University Press.

McMillen, H., Springer, H. K., and T. Ticktin. Here we stand: community resilience to climate change in Hawaii. **Submitted** to *Human Ecology*.

PRODUCTS AND TOOLS FOR COMMUNICATION AND EDUCATION

Honolulu Star-Advertiser Editorial "Culture with Science Can Help Guide Wise Resource Use" 8/20/14

Project Website <http://hbmpweb.pbrc.hawaii.edu/kaupulehu>

Timeline of Adaptation <http://hbmpweb.pbrc.hawaii.edu/kaupulehu/timeline>

Seasonal Calendar (in final stages)

Iconic Image <http://hbmpweb.pbrc.hawaii.edu/kaupulehu/resources>

Graduate course website <https://sites.google.com/a/hawaii.edu/tek-and-climate-change-on-islands/>

SELECT FELLOWSHIPS, SCHOLARSHIPS, GRANTS, AND HONORS (* co-wrote proposal as postdoctoral fellow)

Pacific Islands Climate Change Cooperative. Learning from Traditional Ecological Knowledge to Understand Climate Change Impacts and Preserve Key Cultural and Natural Resources in Ka'ūpūlehu, Hawai'i. PI: T.Ticktin. (\$214,528) May 2012*

National Science Foundation. Developing a new research collaboration in the Pacific: Hawaii-Fiji workshop on sociaecological resiliency to climate change, preliminary data collection, and methods training for students. PIs: T.Ticktin, A.Friendlander, J.Lynham, T.Giambelluca, T.Kabataulaka (\$47,103) March 2012.*

National Science Foundation Ethnoecology Methods Course (NSF-funded training program) July 2010

American Association for University Women Dissertation Fellowship (\$20,000) 2007-2008

University of Hawai'i Graduate Division Dai Ho Chun Dissertation Fellowship (\$6,000) 2007

People & Plants International/Center for International Forestry Research Grant (\$4,300) 2006

National Science Foundation Dissertation Improvement Grant (\$18,250) 2004

Society for Economic Botany Richard Evans Schultes Ethnobotany Award (\$2,500) 2004

Ecology, Evolution and Conservation Biology Program, Scholarship & Research Awards (\$7,000) 2004

Achievement Rewards for College Scientists Foundation ARCS Scholar 2004

National Science Foundation Graduate Research Fellowship Honorable Mention 2003

Andrew W. Mellon Foundation Mellon Fellowship Finalist 2000

Institute for International Education Fulbright Research Fellowship - Tanzania (\$26,000) 1998-1999

CONSULTANCIES

U.S. Forest Service

Lead researcher and author of "Subsistence in Hawai'i: Synthesis & Analysis for the National Report on Sustainable Forests" 8/2014-10/2014

Center for International Forestry Research

Researcher and writer for ethnoecology training modules for the Neotropics 4/2012-7/2013

University of Hawai'i at Mānoa, Department of Public Health and Healthy Hawai'i Initiative
Food Systems Specialist 5/2011-8/2011

U.S. Bureau of the Census, Center for Survey Measurement

Ethnographer 5/2010-2/2011

PRESENTATIONS

Invited Presentations

"A hot (dry) topic: local ecological knowledge and climate change" Guest lecturer for Topics in Biocultural Diversity and Conservation (IS 750). University of Hawai'i, Interdisciplinary Studies 10/29/14

"Applying Anthropology: Ethnographic informed research outside of the Academy" Guest lecturer for Hawaiian Ethnography Seminar (Anth 750). University of Hawai'i, Anthropology Department 10/20/13, 10/25/14.

"Bridging Climate Science and Community" Bridging Climate Science and Traditional Culture To Prepare Moloka'i Fishponds (and Other Coastal Resources) for Climate Change. Ali'i Fishpond, Molokai, Hawaii 9/19/14.

"Cultural Dimensions of Climate Change: Experiences from North Kona" Climate Change Science Workshop for High School Teachers, Hawai'i Institute for Marine Biology Laboratories. HI. 6/25/14

"Ethnobotany: The Science of Survival" North Carolina State University, Plant Sciences Department, Raleigh, NC 5/29/13

"Local Ecological Knowledge Of Plant Medicines: Links To Conservation In Tanga, Tanzania" University of North Carolina at Chapel Hill, Department of Anthropology, Chapel Hill, NC 3/16/09

"Local Knowledge of Plant Medicines --- Links To Human And Ecosystem Health In Tanga, Tanzania" St. Lawrence University, Department of Anthropology, Canton, NY 2/16/09

"Local Knowledge of Plant Medicines --- Links To Human And Ecosystem Health In Tanga, Tanzania" University of Hawai'i –Mānoa, Department of Anthropology Colloquia Series. Honolulu, HI 2/5/2009

"AAUW Dissertation Fellow Presentation: Local Ecological Knowledge, Human Health, and Conservation in Tanzania" American Association of University Women (Island of Kauai Chapter) Kapa'a, Kauai, HI 9/13/2008

"Patterns in Local Ecological Knowledge of Medicinal Plants: Implications for Health and Conservation" Ecology, Evolution, and Conservation Biology Group, University of Hawai'i, Honolulu, HI 4/25/2008

"AAUW Dissertation Fellow Presentation: Medicinal Plant Conservation in Tanzania" American Association of University Women (Island of Hawai'i Chapters) Kona, HI 1/12/2008

"Spinning Virtual Classrooms: Reflections on a Trans-Pacific/Trans-discipline/Trans-campus Experience" Co-presenter with Dr. C. Yano. Remaking Asia Pacific Studies: Knowledge, Power, and Pedagogy. Honolulu, HI. 12/2002

"Noni in Past Polynesian and Contemporary Worldwide Contexts" Invited Lecture for Fitness-Pharma, a Norwegian Nutritional Supplement Company working in Honolulu, HI. 10/2002

"Addressing AIDS in Tanzania: An opportunity for collaboration" Invited by Rotary Club, OK 4/2000

Professional Conference Presentations

"Tools and Products for Integrating Place-based Knowledge Systems to Inform Adaptation Planning" (Co-authors: T. Ticktin and P. Bertelmann). Society for Conservation Biology, Oceania Chapter Annual Meeting in Suva, Fiji 7/10/14

"Adapting to climate change adaptation: A case study from Hawai'i Island on translating climate change science for local communities and conveying community priorities and values to resource managers and policy makers" Association for Social Anthropology in Oceania Annual Meeting, Kona, HI 2/7/2014.

"Learning from Local Ecological Knowledge to Understand and Adapt to Climate Change" Society for Economic Botany 54th Annual Meeting, Plymouth, England 7/2/2013

"Identifying conservation priorities for medicinal plants: Experiences from Tanzania" Society for Economic Botany 48th Annual Meeting, Chicago, IL 6/8/2007

"Medicinal plant market chains: linking health and conservation" International Ethnobotany Summit held at the National Tropical Botanical Garden on Kauai, HI 1/29/2007

"For the Love & Hate of Alien Species: Biodiversity Management & Local Perspectives on Native/Non-native Species in Hawai'i" Society for Economic Botany 44th Annual Meeting, Tucson, AZ 6/7/2003

"Merged Medicines: A Case Study of Local and Biomedical Practitioners in Tanzania" Society of Ethnobiology 23rd Annual Meeting, Seattle, WA 3/16/2003

"Tracing Linkages Between Ecosystem Health and Human Health in Place-based Communities: Socio-politics, Cultural Attachment, and Health Status of Pacific Islanders." Presented by Bruce Wilcox (with A. Loscalzo, and H. McMillen) International Society for Ecosystem Health Conference, Healthy Ecosystems, Healthy People: Linkages between Biodiversity, Ecosystem Health, and Human Health. Washington, D.C., 6/2002

"Negotiating Health Tourism at a Waikiki Spa" Anthropology Depart Colloquium at the University of Hawai'i. Honolulu, HI 4/2002

"Bridging the Gap: Tanga AIDS Working Group" National Priority Setting for HIV/AIDS Research, (sponsored by National AIDS Control Program) Dar es Salaam, Tanzania 10/14/1999

LEADERSHIP POSITIONS

Pacific Resources for Education and Learning (non-profit) – Senior Affiliate 2014-present

People & Plants International (non-profit)–Research Affiliate, Health and Habitat program 2008-present

Society for Economic Botany- Secretary 2008-2013, Council Member 2005-2013

PROFESSIONAL MEMBERSHIPS

- Open Science Network
- EcoHealth Network
- Society for Economic Botany
- International Society of Ethnobiology
- International Society of Ethnopharmacology
- American Anthropological Association

REVIEWER FOR JOURNALS

- Economic Botany
- Ethnobotany Research & Applications
- Human Resources for Health
- Biotropica
- Journal of Ethnobiology
- Social Science and Medicine
- EcoHealth

LANGUAGE PROFICIENCY OTHER THAN ENGLISH

- Swahili: Good speaking, fair reading and writing
- Hawaiian: Environment- and health-specific vocabulary
- Spanish: Basic
- Italian: Basic